

IN THE CLAIMS:

1. (currently amended) A method for reconstructing an image of an object in a computed tomographic imaging system, said method comprising:

scanning an object using a computed tomographic (CT) imaging apparatus to acquire projections of the object;

determining, utilizing the projections, a set of thresholds;

associating selected smoothing kernels with the thresholds;

utilizing, via the computed tomographic imaging system, the smoothing kernels and the projections to produce projections smoothed in three dimensions in accordance with the thresholds such that a first threshold of the set of thresholds triggers smoothing in three dimensions and a second threshold of the set of thresholds does not trigger smoothing in three dimensions; and

filtering and backprojecting the projections to generate an image of the object in the computed tomographic imaging system.

2. (previously presented) A method in accordance with Claim 1 wherein said determining, utilizing the projections, a set of thresholds comprises determining a set of four thresholds including a high threshold, a medium threshold, a low threshold, and a very low threshold, and wherein one of the smoothing kernels is associated with each of the thresholds.

3. (previously presented) A method in accordance with Claim 2 wherein a one-to-one correspondence exists between the smoothing kernels and the thresholds.

4. (canceled)

5. (previously presented) A method in accordance with Claim 1 wherein said utilizing, via the computed tomographic imaging system, the smoothing kernels and

the projections comprises utilizing a smoothing gain factor to modulate smoothing of the smoothed projections.

6. (previously presented) A method in accordance with Claim 5 wherein the smoothing gain factor is a function of the projections.

7.-14. (canceled)

15. (currently amended) A CT imaging apparatus comprising:

a detector;

a source configured to project a beam of x-rays toward said detector; and

a computer system operatively coupled to at least one of said detector and said source, said computer system comprising:

a first module configured to scan an object to acquire projections of the object;

a second module configured to determine, utilizing the projections, a set of thresholds;

a third module configured to associate selected smoothing kernels with the thresholds;

a fourth module configured to utilize the smoothing kernels and the projections to produce projections smoothed in three dimensions in accordance with the thresholds such that a first threshold of the set of thresholds triggers smoothing in three dimensions and a second threshold of the set of thresholds does not trigger smoothing in three dimensions;  
and

a fifth module configured to filter and backproject the projections to generate an image of the object.

16. (previously presented) An apparatus in accordance with Claim 15 wherein, to determine, utilizing the projections, the set of thresholds, said second module

is configured to determine a set of four thresholds including a high threshold, a medium threshold, a low threshold, and a very low threshold and to associate one of the smoothing kernels with each of the thresholds.

17. (previously presented) An apparatus in accordance with Claim 16 wherein the smoothing kernels and the thresholds exist in one-to-one correspondence.

18. (canceled)

19. (previously presented) An apparatus in accordance with Claim 15 wherein, to utilize the smoothing kernels and the projections to produce the projections smoothed in three dimensions, said fourth module is configured to utilize a smoothing gain factor to modulate smoothing of the smoothed projections.

20. (previously presented) An apparatus in accordance with Claim 19 wherein the smoothing gain factor is a function of the projections.

21.-28. (canceled)

29. (currently amended) A computer storage medium comprising instructions thereon, said instructions configured to instruct a computer to:

determine, utilizing projections obtained by scanning an object, a set of thresholds;

associate selected smoothing kernels with the thresholds;

utilize the smoothing kernels and the projections to produce projections smoothed in three dimensions in accordance with the thresholds such that a first threshold of the set of thresholds triggers smoothing in three dimensions and a second threshold of the set of thresholds does not trigger smoothing in three dimensions; and

filter and backproject the projections to generate an image of the object.

30. (previously presented) A computer storage medium in accordance with Claim 29 wherein, to determine, utilizing projections obtained by scanning an object, the

set of thresholds, said instructions are further configured to instruct the computer to determine a set of four thresholds including a high threshold, a medium threshold, a low threshold, and a very low threshold and to associate one of the smoothing kernels with each of the thresholds.

31. (previously presented) A computer storage medium in accordance with Claim 30 wherein the smoothing kernels and the thresholds exist in one-to-one correspondence.

32. (canceled)

33. (previously presented) A computer storage medium in accordance with Claim 29 wherein, to utilize the smoothing kernels and the projections to produce the projections smoothed in three dimensions, said instructions are further configured to instruct the computer to utilize a smoothing gain factor to modulate smoothing of the smoothed projections.

34. (previously presented) A computer storage medium in accordance with Claim 33 wherein the smoothing gain factor is a function of the projections.

35.-42. (canceled)